

AMENDMENTS TO SPECIFICATION

Page 5, line 20 to Page 6, line 4:

The invention gives the user unique new ways of continuously obtaining recordings of source material, such as music and film. If this invention is used for radio transmissions, the invention can continuously record all songs repeated on the radio and save them in a play list for later use. In addition to this, when the user of the ~~device~~device hears a song he wants to record, the user only has to push a button to automatically get a full-length recording of that song. The invention may distinguish between music, commercials and talk on the radio.

Page 8, lines 8-24:

An example of a source material could be a hit song that is transmitted over a radio channel to a radio receiver. By using the method, the listener may after a while and without further manual effort obtain a high-quality full-length version of the hit song, stored in the device. The user can at any time during the playing of the song initiate a recording of the full version of it by simply pressing a button. By using the method of the invention, the device may also automatically extract music in a radio transmission and record each song separately. Thus enabling the user of the ~~device~~device to have continuously updated lists of the separate songs that are played over the radio. This invention gives the user of the invention at least two new unique ways of obtaining music. One way is pushing the button when hearing a desired song, and the other way is by having the ~~device~~device automatically record songs in whole and save them in a play list.

Page 9, line 22 to Page 10, line 13:

The ~~device~~device may also save a sufficiently long section of the recorded media signal surrounding the search key; for hit songs a sufficient length could be 5 minutes before and after the time of activation. This procedure gives the user the whole transmission of the source material that was transmitted at that time. The activation of the recording function may be done by pressing a button, turning a wheel or by activating a handle or any other member on the

receiver. The activation may also be done automatically by the ~~device~~ device. This automated activation may be triggered randomly, periodically, or may be triggered by some recognizable feature of the transmission. In the example of music in a radio transmission, this enables the ~~device~~ device to automatically construct lists of music that has been played on the radio. The music may be stored much like on an ordinary CD player and gives the user a possibility of listening to one song after the next.

Page 18, line 23 to Page 19, line 7:

In another simpler way of performing the invention, the device works through the identification process as described above, as illustrated in Figs. 1 and 2, and works through the iteration process as described above and in Fig. 3, but instead of adding the common segments together, the ~~device~~ device only uses the longest possible identified part of the source material, the longest common segment, as the final version. This simpler version of the invention gives the user of the device a smaller chance of finding the whole source material, but this device may be easier to develop.

Page 20, lines 8-25:

Fig. 5 shows a procedure for creating multiple search keys 500, 510, 520 of media signal 50, after matching and detecting of a first one search key 400, of the media signal 40. The procedure ~~continuous~~ continues with comparing the three search keys 510, 500 and 520 with the media signal[[,]] 60. The search key 520 ~~being~~ is substantially identical to the search key 620 and thus ~~indicating~~ indicates a match between the segments. As indicated above, the media signals 40, 50, 60 may contain the same source material but the three different media signals have different amounts of undesirable signal components, such as talk and commercials, interfering with the source material. This provides the opportunity to compare three stored versions 40, 50, 60 that contain at least parts of the same source material. Since there is a match between the search key 400 and the search key 500, a first common segment 402 may be saved in the final memory. The above iteration may then add common segments before and after the common segment 402 as other common ~~segment~~ segments are found by using the search keys.

Page 28, line 9 to Page 29, line 7:

In one alternative, the searching and matching of sections of media signals is performed only on a sub-set of the available data and/or a transformation of that data. This could be done in many ways. ~~Either for example, the device uses~~ may use only a fraction of the samples building up the material when creating a search key. Another way is that the device may record the media signal in two or more separate files, one ~~one or~~ or more search files and one or more files for later use, e.g., for playing. A search file may be a recording of the media signal but of lower bandwidth, or might be a file that only contains certain frequency intervals. A search file may also be a representation of the recorded media signal. The search file can be used to create the search key and also to search for a second incident of the search key. The search file may also be used to find the beginning and end of the source material. For music transmitted over radio, a search file could be a separate recording of the media signal at a lower sample rate, e.g., 6 kHz. This search file can be used to create the search key as well as to find another incident of the search key and also for finding the beginning and the end of the source material. Then this start and stop information can be used to find the start and stop of the source material in the full-quality recording. One reason to use separate search files is to decrease the need for processing power.

Page 29, line 8-25:

In another way of performing the invention, the device creates a search key and searches for it in files stored on a hard drive. If only the processor speed is fast enough, the factor limiting the speed of the ~~device~~ device is the speed of accessing the stored media signal on the hard drive. The downside of this is that the hard drive has to be access continuously, thus continuously using power. In another way of performing the invention, the ~~device~~ device may create a plurality of search keys continuously as the media signal is transmitted and searches simultaneously for many search keys. Since the search may be done completely in the RAM memory of the device this decreases the need for accessing information from an eventual hard drive and thus saves power for the ~~device~~ device. For example, by loading one hour of music or search file into RAM memory from the hard drive or the transmission, and searching the RAM memory with many

search keys, the hard drive is given a rest and thus the device may save battery power and also work faster.

Page 33, line 13 to Page 34, line 9:

The search process may either be triggered by the user when he notices a source material that ~~the~~ he would like to have recorded, or by the device itself. When the device is not occupied with a manually triggered search request, it can automatically create search keys and conduct searches to build common-segments libraries or lists stored in memory. These lists of common segments that have been repeated in the media signals can be used for future searches or for playing later on by the user. This automatic searching is particularly useful when a radio station is only playing a limited number of songs, such as a top 40s radio station. For stations that have a greater variety of music a larger buffer memory needs to be searched to find the songs that are repeated, but as soon as a song is repeated the ~~device~~ device will identify it and save it. When the user would like to record a song, the device may already have conducted several iterations for a long time period so that the entire song may be available to the listener without having to wait for all the iterations to be completed. By starting the search process among the already identified and saved source materials the search may be much faster, since the desired source material may already earlier have been identified and saved by the ~~device~~ device.

Page 39, lines 17-25:

In one version of the present invention, the method may also generate lists based on the selection and preferences of the user. The user identifies a source material when it is played, activates the device and the source material may automatically be saved in the list of the listener's choice. This may be one list or a plurality of lists of different source material styles or users; for radio, e.g., a list of Hard Rock, one list of Pop Music and a third list that a friend of the main user of the ~~device~~ device has created.

Page 41, line 19 to Page 42, line 4:

In one way of performing the present invention, the user is not exposed to the direct transmission but a slightly delayed version so that the ~~device~~ device may have time to remove any undesirable signal components before they reach the user and fill these gaps with desired content. This may be done by automatically searching the transmission for undesired signal components and changing the delay when an undesired signal component is detected to jump over it. This can eventually create gaps big enough to be filled from, e.g., earlier recorded desired material, and when playing of them is over, the source can be switched back to the earlier program.

Page 43, line 13 to Page 44, line 2:

In another version of the invention the ~~device~~ device will connect to an external system for naming of the desired source material. This could be done by the device transmitting a part of the desired source material, or a search key from the desired source material, to the external system and getting a reply which identifies the source material. If the method is used on music in a radio transmission, the ~~device~~ device will connect to the system and send a piece of the recorded music for identification. The identification system may send the title of the music, the artist or group to the device, in return. This may make it possible for the user to not only listen to the music but also get the title and to know what artist or group that is playing. This identification could be done automatically or ~~being~~ be triggered by the user.

Page 48, lines 17-19:

Media signals can be radio transmissions, television transmissions, transmissions over computer networks, computer files, files already stored on the ~~device already stored files or equal~~ device or equivalent.